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NOTES ON GEOGRAPHIC DISTRIBUTION

Aechmea muricata (Arruda) L.B. Sm. (Bromeliaceae: Bromelioideae): A new record of a threatened species for Rio Grande do Norte, Northeastern Brazil

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ABSTRACT: This paper records the first occurrence of *Aechmea muricata* (Bromeliaceae, Bromelioideae) in the state of Rio Grande do Norte, northeastern Brazil. The taxon was found inside the Mata Estrela Private Reserve, Baía Formosa municipality, southern Rio Grande do Norte. This finding is important to increase the data about the Flora of Rio Grande do Norte, one of the poorest sampled states in Brazil so far, as well as to increase the knowledge about *A. muricata* distribution, since it is officially included in the Brazilian threatened species plant red list.

The Brazilian Atlantic rain forest retains today only 11,73% of its original area (Ribeiro *et al.* 2009). It is considered to be a biodiversity hotspot due to the uniqueness of its biota, which is highly endangered mostly because of habitat loss (Myers *et al.* 2000; Ribeiro *et al.* 2009). Such forest is extremely important for Bromeliaceae due to high endemism, particularly for the Bromelioideae subfamily species living in this habitat (Smith 1934). So far, only four genera and eight species of bromeliads have been recorded in the Atlantic forest of Rio Grande do Norte (RN) (Martinelli *et al.* 2008). However, this data could be underestimated as a result of poor sampling for this family in RN. Rio Grande do Norte is considered one of the poorest Brazilian states in terms of floristic sampling and recent field surveys registered several new occurrences (Versieux *et al.* 2013a; Versieux *et al.* 2013b). Therefore, the numbers listed for the Flora of Rio Grande do Norte not based on intensive and careful fieldwork investigation is most likely outdated.

The eastern Brazilian rain forest is the center of diversity of *Aechmea* Ruiz & Pav., which comprises approximately 200 species in eight subgenera (Smith and Downs 1979; Luther 2010). This genus is cited in the literature as one of the largest and is among the most taxonomically complex in the entire family (Smith and Downs 1979). *Aechmea muricata* (Arruda) L.B. Sm. belongs to subgenus *Chevaliera*, which holds 21 species that are characterized by the presence of a strobiliform or capituliform and usually simple inflorescence, conspicuous peduncle bracts, flowers polystichously arranged and protected by a coriaceous floral bract (Smith and Downs 1979; Sousa and Wanderley 2000; Canela *et al.* 2003; Silva 2003; Sousa *et al.* 2008). *Aechmea muricata* is remarkable by its cylindrical and green spicate inflorescence, by the peduncle covered by conspicuous bracts with entire margins and sharply pointed apex, as well as by its dark blue flowers (Smith and Downs 1979; Sousa and Wanderley 2000; Sousa *et al.* 2008). This species is restricted to the northeastern Brazil, occurring at sandy areas near the seacoast, being either a terrestrial or an epiphyte (Smith and Downs 1979; Sousa and Wanderley 2000; Leme and Siqueira-Filho 2006). Currently, this taxon has been cited only for Pernambuco and Alagoas States (Forzza *et al.* 2013) and here we document the first vouchered occurrence of *A. muricata* for the state of Rio Grande do Norte.

The Mata Estrela Private Reserve is located at the municipality of Baía Formosa (06°22′′10″ S, 35°00′28″ W), close to the border of Rio Grande do Norte and Paraíba states (Figure 1). This new record for *A. muricata*

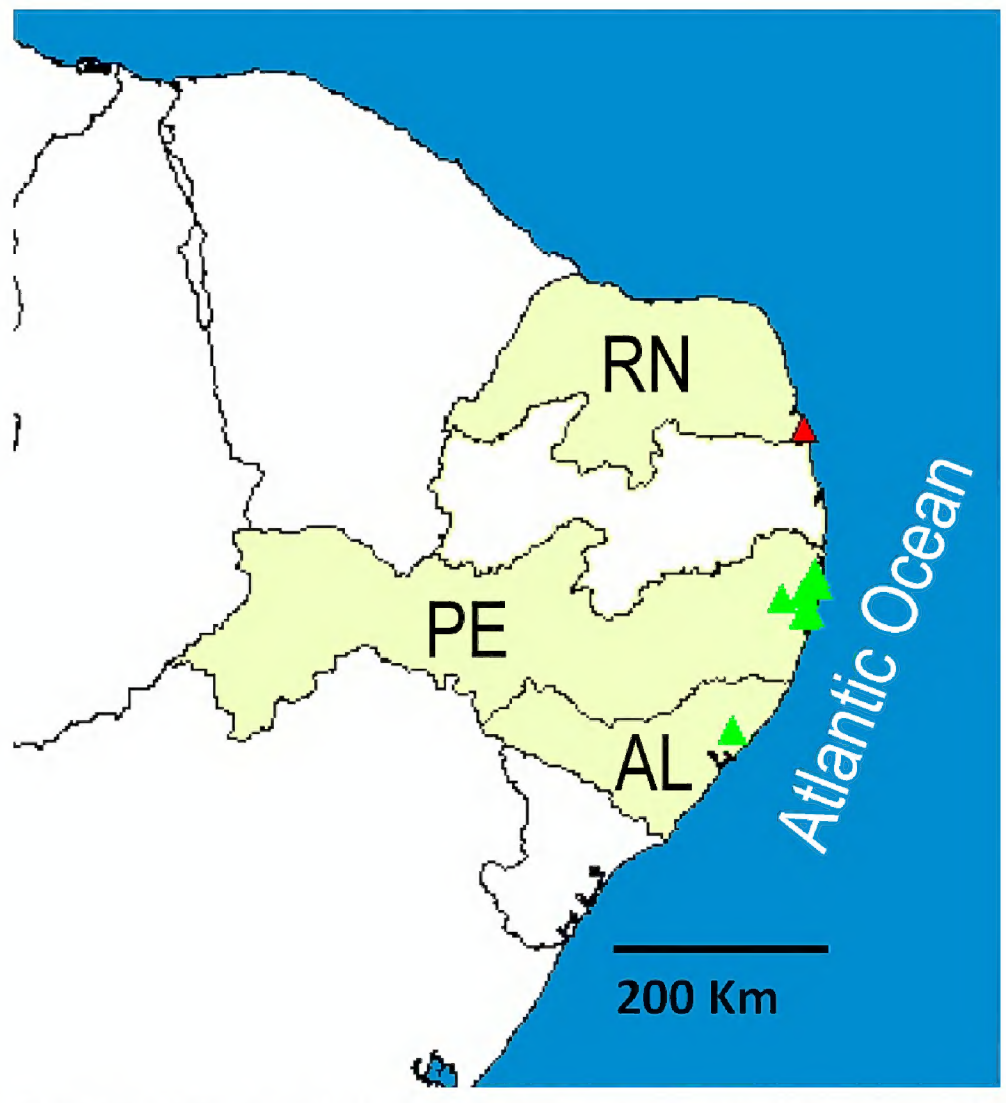

FIGURE 1. Map of Northeastern Brazil, showing in pale yellow the states where *Aechmea muricata* occurs. The new occurrence in Rio Grande do Norte is indicated by a red triangle, showing ca. 180 km northern extension from earlier records (green triangles).

represents approximately 180 km northern expansion in its distributional range. Only one small population of *A. muricata* was observed in Mata Estrela and the individuals at this locality are terrestrial, occurring in sandy soil and sunny open habitat, in the coastal sand plain scrub vegetation. The specimen was photographed in the field, collected and deposited in the herbarium of the Federal University of Rio Grande do Norte (UFRN; *R. Magalhães 19*) (Figure 2). *Aechmea muricata* is currently on the list of Brazilian endangered species (MMA 2008) and this new record is particularly important for setting strategies for its conservation and to document its occurrence inside a reserve. This new record is also important to increase the information and to update the data about the Flora of Rio Grande do Norte, which still remains poorly known (Versieux *et al.* 2013a). Also in Mata Estrela, another new occurrence was recently registered for the genus *Cryptanthus* (Bromeliaceae, Bromelioideae) (Versieux *et al.* 2013b), which provides further evidence for investigating this poorly known area and the adjacent remnants of the Rio Grande do Norte Atlantic Rain Forest.

Figure 2. A, B: Specimen of *Aechmea muricata* collected in Baía Formosa, Rio Grande do Norte (Voucher: Magalhães 19, UFRN). C: photo of a living plant in the field. Photos: R. Magalhães.

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